

## CENTRAL INTELLIGENCE AGENCY

## INFORMATION REPORT

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COUNTRY	USSR (Kalinin Oblast)	REPORT NO.	[REDACTED]
SUBJECT	Aircraft Projects Nos. 346 and 478 Undertaken at Zavod No. 1, Podberezye	DATE DISTR.	29 April 1953
		NO. OF PAGES	25X1A
DATE OF INFO.	[REDACTED]	25X1A REQUIREMENT NO.	[REDACTED]
PLACE ACQUIRED	[REDACTED]	REFERENCES	[REDACTED]

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1. The wing of the 346 airplane was designed by Nutzholt. The leading edge was fabricated by the deep drawing of aluminum sheets over dies. These dies had been made at Halle and removed to the USSR. I believe that there were three separate sections of the leading edge for each wing -- six sections in all.
2. In addition to bringing the dies for body parts, the Walther engines for the 346 were also brought from Germany. Originally three of these engines were available, but it became necessary to cannibalize two of them to keep the third in operation. I believe that the Soviets began construction of combustion chambers for the Walther engine, although I do not know where. I am quite certain, however, that none of these chambers had been completed by the time we left the USSR. In addition to the engines mentioned above, one special engine, with a single combustion chamber and twin nozzles, was also used. It had been brought from Germany.
3. In the project dealing with the 478 aircraft, the German designers were

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given a completely free hand to come up with a design for a very high performance fighter. The design that eventuated is reasonably suited for mass production, but I do not know if this was an aim that the designers kept in mind in working up the plans for it. The designers did not attempt to avoid the use of any particular materials. They assumed that everything that was needed was in reasonable supply. Neither did they attempt to avoid the use of any particular type of production machinery. The production machinery at Zavod No. 1 was in good shape, and included many excellent German machines. Some of the machinery was rather old, but in good operating condition.

4. Production jigs were not specifically worked on by the German designers at Zavod No. 1. However, they did design all jigs necessary for the production of the experimental and prototype aircraft, and these jigs could be readily copied for use in a production facility. I do not know if any of the jigs designed at Zavod No. 1 were so copied. I am sure that the engines to be used in the 478 airplane were to be similar to those used in the 346. Four such engines were to be used.
5. Regarding the dropping of the 478 project, it was our impression that this project was taken away from the German design groups strictly for security reasons. I am quite sure that the files were not destroyed, because the Soviets approached the Germans several times after the project had been officially dropped for help on various details of the work that had been done. The Soviets on this project moved away from the German group at the time that the project was officially dropped and into another section of the plant. They did not, however, leave the plant and go elsewhere.
6. The chances of the Soviets' developing this project from the point that the Germans were taken off it, and successfully completing the development work, are very good. The big deterrent would be in finding one Soviet engineer to take over-all command of the development work yet to be done. However, some of the key German personnel associated with this project are still at Zavod No. 1, and this may be a reason for having kept them there.
7. On several occasions, Soviet engineers came to Zavod No. 1 to consult with development engineers, but they were never allowed to consult with the Germans directly; any question they had for the Germans had to be placed through the Soviets at Zavod No. 1. I am unable to say, therefore, who these engineers were or where they had come from, and I am similarly unable to give any opinion on what aircraft components or engines any factory in the USSR may be producing.

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